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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/954,449	09/17/2001	Youqi Wang	1012-125 (2001-023)	6572

7590 03/29/2004  
Scott A. Chapple  
Dobrusin & Thennisch PC  
Suite 311  
401 South Old Woodward Avenue  
Birmingham, MI 48009

EXAMINER

GUTIERREZ, ANTHONY

ART UNIT	PAPER NUMBER
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2857

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

814.

**Office Action Summary**

Application No.

09/954,449

Applicant(s)

WANG ET AL.

Examiner

Anthony Gutierrez

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 September 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 30 is/are allowed.
- 6) ☒ Claim(s) 1-3, 6, 8-18 and 21-29 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 7, 19 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/22/02, 4/16/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The Examiner has considered all obtainable references on the Information Disclosure Statement. Applicant is required to submit copies of those references cited but marked as not considered by the Examiner.

### ***Specification***

2. The Abstract of the disclosure is objected to because it contains a spelling error. The word "four" is incorrectly spelled as "for" in the phrase "the at least for samples". Correction is required. See MPEP § 608.01(b).

### ***Claim Objections***

3. Claim 7 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim must depend from other claims in the alternative only. See MPEP § 608.01(n). Accordingly, claim 7 has not been further treated on the merits.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1-3, 6, 8-18, and 21-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (US Patent Application Publication US 2003/0007894 A1) in view of May et al. (US Patent 5,323,229).

As to claims 1, 2, 17, and 18, Wang et al. discloses a method for optically screening sample materials for at least one characteristic, the method comprising: (a) providing a library of sample materials upon a substrate (paragraph 0126); (b) directing an electromagnetic wavefront through a beam-splitter at a surface of each of the at least four sample materials wherein the surface of each of the at least four sample materials is substantially non-planar (paragraph 0094 and Figure 30); (c) monitoring a response of the electromagnetic wavefront after the wavefront encounters the at least four sample materials (paragraph 0024 , lines 1-5); and (d) correlating the response of the electromagnetic wavefront to a characteristic of the at least four sample materials (paragraph 0024, lines 5-9); wherein steps (a) through (d) are performed without substantially contacting the at least four sample materials with any probe (paragraph 0023).

Wang et al. does not specifically disclose that the beam splitter comprises a partial mirror.

May et al., however, discloses a beam-splitter that comprises a partial mirror and is used for optical interferometry and further teaches that this type of beam-splitter is commonly used for optical beam splitting (title, column 10, lines 12-23). May et al. teaches several advantages of the system of invention

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including providing real-time measurement of the thickness of optically transmissive material using a non-contact technique (col. 6, lines 28-53).

It therefore would have been obvious to one of ordinary skill in the art at the time of invention to include a beam splitter using a partially reflective mirror in order to provide optical measurement using a non-contact technique with equipment commonly available in the art.

As to claim 3, Wang et al. further discloses that the characteristic of the at least four sample materials is topography of a surface of the at least four sample materials (paragraph 0106).

As to claims 6 and 21, Wang et al. further discloses wherein steps (b) through (d) are repeated for determining a change in the characteristic (paragraph 0220).

As to claim 8, Wang et al. further discloses that the characteristic is a volume of the at least four sample materials (paragraphs 0132 and 0182).

As to claims 9 and 22, Wang et al. further discloses wherein each of the at least four sample materials is supported upon a suspended platform (paragraphs 0137, and 0187).

As to claims 10 and 23, Wang et al. further discloses applying a stimulus to the at least four sample materials prior to the step of monitoring the response of the electromagnetic wavefront wherein the stimulus causes movement of the at least four sample materials at least during a portion of the step of monitoring the response of the electromagnetic wavefront (paragraphs 0159-0160).

As to claims 11 and 24, Wang et al. further discloses that the movement is at least partially oscillation (paragraph 0114).

As to claims 12 and 25, Wang et al. further discloses wherein the characteristic of the at least four sample materials is AC resonance (paragraph 0004).

As to claims 13 and 26, Wang et al. further discloses wherein said electromagnetic wavefront is provided by an interferometer (paragraph 0093).

As to claims 14-16, and 27-29, Wang et al. further discloses wherein the electromagnetic wavefront is provided by a laser (paragraph 0091).

### ***Allowable Subject Matter***

6. Claim 30 is allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 30 of the Applicant's claimed invention is deemed allowable over the prior art as the prior art fails to teach or fairly suggest a method for optically screening an array of sample materials wherein each sample is a polymeric product of a separate polymer synthesis reaction comprising monitoring an electromagnetic wavefront after it is reflected from a surface of sample materials to determine distances of the surface from a reference location for determining the topography of the surface as a mathematical function and correlating the topography of the surface of each sample material to a volume of the sample materials by integrating the mathematical function over an area defined by a surface of each of the sample materials and determining a change in density by the repetition of these steps.

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7. Claims 4, 5, 19, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### **Conclusion**

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 6,625,546 discloses a method that uses molecular mass measurements of individual compounds to identify structures in a chemical or physical library.

US Patent 6,586,257 discloses a multowell plate scanner for high throughput screening that compensates for variations in configurations or materials of the platform in which the assay is performed.

US Patent Application Publication US 2002/0177135 A1 discloses a method for simultaneous multiple biochip analysis which comprise arrays for high throughput analysis.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Gutierrez whose telephone number is (571) 272-2215. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on (571) 272-2216. The fax


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phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anthony Gutierrez

  
3/8/04

  
MARC S. HOFF  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800